needed to ensure its proper performance, means must be provided to ensure the continuous supply of such information in the event of failure of the ship's main or emergency source of electrical power.

(i) An uninterruptible power supply or other means of ensuring a continuous supply of electrical power, within equipment tolerances, shall be provided to all GMDSS equipment that could be affected by normal variations and interruptions of ship's power.

[57 FR 9065, Mar. 16, 1992, as amended at 68 FR 46977, Aug. 7, 2003]

§ 80.1101 Performance standards.

(a) The abbreviations used in this section are as follows:

(1) International Maritime Organization (IMO).

(2) International Telecommunication Union—Telecommunication Standardization Bureau (ITU-T) (Standards formerly designated as CCITT are now designated as ITU-T.)

(3) International Electrotechnical Commission (IEC).

(4) International Organization for Standardization (ISO).

(5) International Telecommunication Union—Radiocommunication Bureau (ITU-R) (Standards formerly designated as CCIR are now designated as ITU-R.)

(b) All equipment specified in this subpart must meet the general requirements for shipboard equipment in conformity with performance specifications listed in this paragraph, which are incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(1) IMO Resolution A.694(17), ''General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids,'' adopted 6 November 1991.

(2) ITU-T Recommendation E.161, ''Arrangement of Digits, Letters and Symbols on Telephones and Other Devices that Can Be Used for Gaining Access to a Telephone Network,'' 1993.

(3) ITU-T Recommendation E.164.1, ''Series E: Overall Network Operation, Telephone Service, Service Operation and Human Factors; Operation, Numbering, Routing and Mobile Services—International Operation—Numbering Plan of the International Telephone Service: Criteria and Procedures for the Reservation, Assignment, and Reclamation of E.164 Country Codes and Associated Identification Codes (ICs),'' March 1998.

(4) IEC 60092–101, Edition 4.1, ''Electrical installations in ships—part 101: Definitions and general requirements,'' August 2002.

(5) IEC 60533, ''Electrical and electronic installations in ships—Electromagnetic compatibility,'' November 1999.

(6) IEC Publication 60945, ''Maritime navigation and radiocommunication equipment and systems—General requirements—Methods of testing and required test results,'' Edition 4.0, with Annexes, August 2002.

(7) ISO Standard 3791, ''Office Machines and Data Processing Equipment—Keyboard Layouts for Numeric Applications,'' First Edition 1976(E).

(c) The equipment specified in this subpart must also conform to the appropriate performance standards listed in paragraphs (c)(1) through (10) of this section, which are incorporated by reference, and must be tested in accordance with the applicable IEC testing standards listed in paragraph (c)(11) of this section, and are also incorporated by reference.

(1) *NAVTEX receivers:* (i) IMO Resolution A.525(13), ''Performance Standards for Narrow-band Direct Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships,'' including Annex, adopted 17 November 1983.

(ii) ITU-R Recommendation M.540–2, ''Operational and Technical Characteristics for an Automated Direct-printing Telegraph System for Promulgation of Navigational and Meteorological Warnings and Urgent Information to Ships,'' including Annexes, 1990.

(2) *VHF radio equipment:* (i) IMO Resolution A.803(19), ''Performance Standards for Shipborne VHF Radio Installations Capable of Voice Communication and Digital Selective Calling,'' with Annex, adopted 23 November 1995, as amended by IMO Resolution

MSC.68(68), ''Adoption of Amendments to Performance Standards for Shipborne Radiocommunication Equipment,'' GMDSS terrestrial communications—1.1(c), adopted 6 June 1997.

(ii) ITU–R Recommendation M.493–11, ''Digital Selective-calling System for Use in the Maritime Mobile Service,'' with Annexes 1 and 2, 2004.

(iii) ITU–R Recommendation M.541–9, ''Operational Procedures for the Use of Digital Selective-Calling Equipment in the Maritime Mobile Service,'' with Annexes 1 through 5, 2004.

(3) *MF radio equipment:* (i) IMO Resolution 804(19), ''Performance Standards for Shipborne MF Radio Installations Capable of Voice Communication and Digital Selective Calling,'' with Annex, adopted 23 November 1995, as amended by IMO Resolution MSC.68(68), ''Adoption of Amendments to Performance Standards for Shipborne Radiocommunication Equipment,'' GMDSS terrestrial communications—1.2(c), adopted 6 June 1997.

(ii) ITU–R Recommendation M.493–11, ''Digital Selective-calling System for Use in the Maritime Mobile Service,'' with Annexes 1 and 2, 2004.

(iii) ITU–R Recommendation M.541–9, ''Operational Procedures for the Use of Digital Selective-Calling Equipment in the Maritime Mobile Service,'' with Annexes 1 through 5, 2004.

(4) *MF/HF radio equipment:* (i) IMO Resolution A.806(19), ''Performance Standards for Shipborne MF/HF Radio Installations Capable of Voice Communication, Narrow-Band Direct Printing and Digital Selective Calling,'' with Annex, adopted 23 November 1995, as amended by IMO Resolution MSC.68(68), ''Adoption of Amendments to Performance Standards for Shipborne Radiocommunication Equipment,'' GMDSS terrestrial communications—1.3(c), adopted 6 June 1997.

(ii) ITU–R Recommendation M.493–11, ''Digital Selective-calling System for Use in the Maritime Mobile Service,'' with Annexes 1 and 2, 2004.

(iii) ITU–R Recommendation M.541–9, ''Operational Procedures for the Use of Digital Selective-Calling Equipment in the Maritime Mobile Service,'' with Annexes 1 through 5, 2004.

(iv) IMO Resolution A.700(17), ''Performance Standards for Narrow-band Direct-printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (MSI) by HF,'' adopted 6 November 1991.

(5) *406.0–406.1 MHz EPIRBs:* (i) IMO Resolution A.810(19), ''Performance Standards for Float-free Satellite Emergency Position-indicating Radio Beacons (EPIRBs) Operating on 406 MHz,'' with Annex, adopted 23 November 1995, and IMO Resolution A.812(19), ''Performance Standards for Float-free Satellite Emergency Position-indicating Radio Beacons Operating Through the Geostationary INMARSAT Satellite System on 1.6 GHz,'' with Annex, adopted 23 November 1995.

(ii) IMO Resolution A.662(16), ''Performance Standards for Float-free Release and Activation Arrangements for Emergency Radio Equipment,'' adopted 19 October 1989.

(iii) ITU–R Recommendation M.633–3, ''Transmission characteristics of a satellite emergency position-indicating radiobeacon (satellite EPIRB) system operating through a low polar-orbiting satellite system in the 406 MHz band,'' 2000.

(iv) The 406.0–406.1 MHz EPIRBs must also comply with § 80.1061.

(6) *9 GHz radar transponders:* (i) IMO Resolution A.802(19), ''Performance Standards for Survival Craft Radar Transponders for Use in Search and Rescue Operations,'' with Annex, adopted 23 November 1995.

(ii) ITU-R Recommendation M.628–3, ''Technical Characteristics for Search and Rescue Radar Transponders,'' with Annexes, 1994.

(7) *Two-Way VHF radiotelephone:* (i) IMO Resolution A.809(19), ''Performance Standards for Survival Craft Two-Way VHF Radiotelephone Apparatus,'' including Annexes 1 and 2, adopted 23 November 1995.

(ii) IMO Resolution MSC.80(70), ''Adoption of New Performance Standards for Radiocommunication Equipment,'' with Annexes, adopted 8 December 1998.

(8) *INMARSAT Ship Earth Station Capable of Two-Way Communications:* IMO Resolution A.808(19), ''Performance

Standards for Ship Earth Stations Capable of Two-Way Communications,'' with Annex, adopted 23 November 1995.

(9) *INMARSAT-C SES:* IMO Resolution A.807(19), ''Performance Standards for INMARSAT-C Ship Earth Stations Capable of Transmitting and Receiving Direct-Printing Communications,'' with Annex, adopted 23 November 1995, as amended by IMO Resolution MSC.68(68), ''Adoption of Amendments to Performance Standards for Shipborne Radiocommunication Equipment,'' Satellite communications—2.3(c), adopted 6 June 1997.

(10) *INMARSAT EGC:* IMO Resolution A.664(16), ''Performance Standards for Enhanced Group Call Equipment,'' adopted 19 October 1989.

(11) *INMARSAT–E EPIRBs:* Note: Service to INMARSAT–E EPIRB stations terminated on December 1, 2006, so distress signals from INMARSAT–E EPIRB stations will not be received by any Rescue Coordination Center.

(i) IMO Resolution A.812(19), ''Performance Standards for Float-Free Satellite EPIRBs Operating Through the Geostationary INMARSAT Satellite System on 1.6 GHz,'' adopted 23 November 1995, and Annex, ''Recommendation on Performance.''

(ii) IMO Resolution A.662(16), ''Performance Standards for Float-Free Release and Activation Arrangements for Emergency Radio Equipment,'' with Annex, adopted 19 October 1989.

(iii) Recommendation ITU–R M.632–3, ''Transmission Characteristics of a Satellite Emergency Position-Indicating Radio Beacon (Satellite EPIRB) System Operating Through Geostationary Satellites in the 1.6 GHz Band,'' 1997.

(iv) IEC 61097–5, First Edition ''Global maritime distress and safety system (GMDSS)—part 5: Inmarsat-E Emergency position indicating radio beacon (EPIRB) operating through the Inmarsat system—operational and performance requirements, methods of testing and required test results,'' including Annexes A, B, and C, 1997.

(v) The INMARSAT E–EPIRBs must also comply with § 80.1063.

(12) *Automatic Identification Systems (AIS):* (i) ITU–R M.1371–1, ''Technical characteristics for a universal shipborne automatic identification system using time division multiple access in the VHF maritime mobile band,'' with Annexes, August 2001.

(ii) IMO Resolution MSC.74(69), ''Adoption of New and Amended Performance Standards, Annex 3 Recommendation on Performance Standards for a Universal Shipborne Automatic Identification Systems (AIS),'' adopted 12 May 1998.

(iii) IEC 61162–1, Second Edition, ''Maritime navigation and radiocommunication equipment and systems—Digital interfaces—Part 1: Single talker and multiple listeners,'' July 2000.

(iv) IEC 61162–100, Edition 1.0, ''Maritime navigation and radiocommunication equipment and systems—Digital interfaces—Part 100: Single talker and multiple listeners—Extra requirements to IEC 61162–1 for the UAIS,'' April 2002.

(v) IEC 61993–2, First Edition, ''Maritime navigation and radiocommunication equipment and systems—Automatic identification systems (AIS)—Part 2: Class A shipborne equipment of the universal automatic identification system (AIS)—Operational and performance requirements, methods of test and required test results,'' December 2001, with Annexes.

(vi) With respect to Class B AIS devices only, IEC 62287–1 International Standard, ''Maritime navigation and radio communication equipment and systems—Class B shipborne equipment of the Automatic Identification System—part 1: Carrier—sense time division multiple access (CSTDMA) techniques,'' First Edition 2006–03 (incorporated by reference at § 80.231).

(13) *Standards for testing GMDSS equipment:*

(i) IEC 1097–1 Ed 1.0, ''Global Maritime Distress and Safety System (GMDSS)—Part 1: Radar transponder—Marine Search and Rescue (SART)—Operational and Performance Requirements, Methods of Testing and Required Test Results,'' with Annexes, July 1992.

(ii) IEC 61097–3 Ed 1.0, ''Global maritime distress and safety system (GMDSS)—part 3: Digital selective calling (DSC) equipment—Operational

and performance requirements, methods of testing and required testing results,'' with Annexes, June 1994.

(iii) IEC 61097–4 Ed 1.0, ''Global maritime distress and safety system (GMDSS)—part 4: INMARSAT–C Ship Earth Station and INMARSAT enhanced group call (EGC) equipment—Operational and performance requirements, methods of testing and required test results,'' November 1994.

(iv) IEC 61097–6, ''Global maritime distress and safety system (GMDSS)—part 6: Narrowband direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX)—Operational and performance requirements, methods of testing and required test results,'' February 1995.

(v) IEC 61097–7, ''Global maritime distress and safety system (GMDSS)—part 7: Shipborne VHF radiotelephone transmitter and receiver—Operational and performance requirements, methods of testing and required test results,'' October 1996.

(vi) IEC 61097–8 Ed 1.0, ''Global Maritime Distress and Safety System (GMDSS)—Part 8: Shipborne watchkeeping receivers for the reception of digital selective calling (DSC) in the maritime MF, MF/HF, and VHF bands—Operational and Performance Requirements, Methods of Testing and Required Test Results,'' with Annexes, September 1998.

(vii) IEC 61097–9 Ed 1.0, ''Global Maritime Distress and Safety System (GMDSS)—Part 9: Shipborne Transmitters and Receivers for Use in the MF and HF Bands Suitable for Telephony, Digital Selective Calling (DSC) and Narrow Band Direct Printing (NBDP)—Operational and Performance Requirements, Methods of Testing and Required Test Results,'' with Annexes, December 1997.

(viii) IEC 61097–10 Ed 1.0, ''Global Maritime Distress and Safety System (GMDSS)—Part 10: INMARSAT-B Ship Earth Station Equipment—Operational and Performance Requirements, Methods of Testing and Required Test Results,'' with Annexes, June 1999.

(ix) IEC 61097–12 Ed 1.0, ''Global maritime distress and safety system (GMDSS)—part 12: Survival craft portable two-way VHF radiotelephone apparatus—Operational and performance requirements, methods of testing and required test results,'' December 1996.

(x) IEC 61097–13, First edition, ''Global maritime distress and safety system (GMDSS)—part 13: INMARSAT F77 ship earth station equipment—Operational and performance requirements, methods of testing and required test results,'' May 2003.

(d) The documents referenced in paragraphs (a) through (c) of this section have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Identification data and place to purchase for each of the referenced documents are listed as follows:

(1) Copies of IMO Resolutions, the 1974 SOLAS Convention, and the 1983 and 1988 amendments to the 1974 SOLAS Convention can be purchased from Publications, International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(i) IMO Resolution A.525(13) is contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 13th Session, 1983, (IMO, London, 1984), Sales Number 073 84.07.E.

(ii) IMO Resolutions A.802(19), A.803(19), A.804(19), A.806(19), A.807(19), A.808(19), A.810(19), A.811(19) and A.812(19) are contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 19th Session, 1995, (IMO, London, 1988), Sales Number IMO–194E ISBN No. 91–801–1416–6.

(iii) IMO Resolutions A.662(16) and A.664(16) are contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 16th Session, 1989, (IMO, London, 1990), Sales Number 136 90.04.E

(iv) IMO Resolutions A.694(17), and A.700(17) are contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 17th Session, 1991, (IMO, London, 1991), Sales Number IMO–142E ISBN No. 91–801–1281–3.

(2) ITU-R Recommendations, ITU Radio Regulations, and ITU-T publications can be purchased from the International Telecommunication Union (ITU), Place des Nations, CH–1211 Geneva 20, Switzerland.

(i) All ITU-R Recommendations referenced in this section are contained in Recommendations of the ITU-R, Volume M series parts 3, 4, and 5.

(ii) ITU-T Recommendation E.161 is contained in Facicle II.2 Volume II—Telephone Network and ISDN Operation, Numbering, Routing and Mobile Service, (ITU, Geneva, 1989, revised in 1993 and 1995).

(iii) ITU-T Recommendation E.164.1 is contained in Facicle VI.1 Volume II Numbering Plan for the International Telephone Service, (ITU, Geneva, 1989, revised in 1997).

(3) IEC publications can be purchased from the International Electrotechnical Commission, 3 Rue de Varembe, CH–1211 Geneva 20, Switzerland, or from the American National Standards Institute (ANSI) through its NSSN operation (*www.nssn.org*), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York, NY 10036, telephone (212) 642–4900.

(4) ISO Standards can be purchased from the International Organization for Standardization, 1 Rue de Varembe, CH–1211 Geneva 20, Switzerland, or from the American National Standards Institute (ANSI) through its NSSN operation (*www.nssn.org*), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York, NY 10036, telephone (212) 642–4900.

(5) Copies of the publications listed in this section that are incorporated by reference can be inspected at the Federal Communications Commission, 445 12th Street, SW., (room CY-A257), Washington, DC, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

[68 FR 46977, Aug. 7, 2003, as amended at 69 FR 64680, Nov. 8, 2004; 73 FR 4490, Jan. 25, 2008; 74 FR 5125, Jan. 29, 2009]

§ 80.1103 Equipment authorization.

(a) All equipment specified in § 80.1101 must be certificated in accordance with 47 CFR part 2 specifically for GMDSS use, except for equipment used in the INMARSAT space segment which must be type-approved by INMARSAT and verified in accordance with 47 CFR part 2 specifically for GMDSS use. The technical parameters of the equipment must conform to the performance standards as specified in § 80.1101. For emergency position-indicating radiobeacons operating on 406.0–406.1 MHz (406.0–406.1 MHz EPIRBs) that were authorized prior to April 15, 1992, and meet the requirements of § 80.1101, the manufacturer may attest by letter that the equipment (indicate FCC ID#) meets the requirements of § 80.1101 and request that it be denoted as approved for GMDSS use.

(b) Applicants for certification must submit with their applications measurement data sufficiently complete to ensure compliance with the technical parameters. The application must include the items listed in 47 CFR 2.1033. Additional measurement data or information may be requested depending upon the equipment. For items not listed in § 2.1033 of this chapter, the applicant must attest that the equipment complies with performance standards as specified in § 80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission.

(c) Applicants for verification must attest that the equipment complies with performance standards as specified in § 80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission. An application must include the items listed in §§ 2.953 and 2.955 of this chapter and a copy of the type-approval certification indicating that equipment meets GMDSS standards and includes all peripheral equipment associated with the specific unit under review.